ATTACHMENT B

PRESENT STRENGTHS

Multiple Methods:

- Preflight
- On board
- Vicarious

MAIN CRITICISMS

No level-1 production plan identified

No level-1 ATBD presented

Uncertainty due to budget cuts, regarding what cal inputs will be available at launch

CONTINUING CONCERNS

Budget cuts of calibration activities (already implementation of SD/SDSM and SRCA have been eliminated from EM and development of a thermal transfer radiometer is at risk)

We will not reliably know the relative accuracy of the various calibration methods until three months after launch

The preflight characterization of the PFM, (including the characterization and accuracy of the OBCs, particularly the SRCA) will not be completed until 4/96. This leaves little (inadequate) time to modify the OBC hardware and/or algorithms as a result of problems, such as scattered light, that might be discovered during characterization

Thermal calibration missed input from MST.

ATTACHMENT C

SPATIAL REGISTRATION

DETECTORS	SPECIFICATION	EXPECTED AT-LAUNCH KNOWLEDGE	ON-ORBIT TRACKING TECHNIQUE	EXPECTED ON-ORBIT KNOWLEDGE	EXPECTED ON-ORBIT CONTROL
Within band		0.05 pixel	along track SRCA reticle	~ 0.1 pixel	
Within FPA	0.2 pixel 0.1 pixel goal	**0.1 pixel for 250m pixels**	**along and across track SRCA reticle**	**0.05 pixel across-track**	**0.03 pixel**
Between warm FPA	**0.2 pixel**	**≥0.12 pixel**	**across-track SRCA reticle**	**0.05 pixel**	**0.03 pixel**
Between cold FPA	**0.2 pixel**	**≥ 0.1 pixel**	**across-track SRCA reticle**	**0.05 pixel**	**0.03 pixel**
Warm to cold FPAs	**0.2 pixel**	**≥ 0.1 pixel**	**across-track SRCA reticle**	**0.05 pixel**	**0.03 pixel**

5/5/94

RADIOMETRIC CALIBRATION

Band	Specification	Expected At-launch Knowledge	On-orbit Tracking technique†	Expected On-orbit Uncertainty	Expected On-orbit stability
1-19	5% 2% reflective (to the sun)	4.5% λ dependent ≤ 3% * relatively λ independent	SD/SDSM (SRCA for within orbit) Lunar viewing	~5 % 2 %	Degrades as SD loses track of SDSM To mitigate for the above effects
21 fire	10%	TBD	TBD	TBD	TBD
20	0.75%	0.75%	blackbody	1.25%‡	Sensitive to blackbody and scan mirror contamination
31, 32	0.5 %	0.5 %	blackbody	1%	same as band 20
22-36. ex 31, 32	1 %	1 %	blackbody	1 %	same as band 20

† Iindicates use of cold space for a zero aperture radiance field.

* This is done without use of SCRA

‡ Silver overcoat on nickel mirror

The numerical values are for uncertainties, and correspond to relatively low contrast spectral/spatial/temporal varying scenes.

5/5/94

MODIS BASELINE OPERATIONAL CALIBRATION

SPECTRAL CALIBRATION

WAVELENGTH REGION	SPECIFICATION	EXPECTED AT-LAUNCH KNOWLEDGE	ON-ORBIT TRACKING TECHNIQUE	EXPECTED ON-ORBIT KNOWLEDGE
BELOW 1.0 μmeter	0.5 nm	0.25nm	SRCA	0.5 nm
above 1.0 μmeter	scales as λ(in microns)* 0.5/1000	0.25nm	None	TBD

SRCA Wavelength performance verificed through didydmium absorption features.